

THAT WHICH IS CLAIMED IS:

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1. A method for correcting vision comprising:
  - a) selecting a patient's eye for treatment;
  - b) folding a surface flap of corneal tissue of the selected eye aside;
  - c) exposing a surface of the cornea under the flap;
  - d) applying a first laser shot to the exposed corneal surface;
    - i) the laser shot having a wavelength of 193 nanometers;
    - ii) the laser shot having a diameter and an area;
    - iii) the laser shot having a center point;
    - iv) the laser shot area being smaller than the area of the exposed corneal surface; and
  - v) the laser shot ablating corneal tissue from the exposed corneal surface;
  - e) applying a second laser shot to the exposed corneal surface;
    - i) the laser shot having a wavelength of 193 nanometers;
    - ii) the laser shot having a diameter and an area;
    - iii) the laser shot having a center point;
    - iv) the laser shot area being smaller than the area of the exposed corneal surface; and
  - v) the laser shot ablating corneal tissue from the exposed corneal surface;
  - f) the second laser shot being removed from the first laser shot;
  - g) the distance between the center point of the first laser shot and the center point of the second laser shot being sufficient so that any plume of ablated material from the first laser shot will not substantially interfere with the second laser shot; and,
  - h) repeating acts d) through g) a plurality of times.

2. A method for correcting vision comprising:
  - a) selecting a patient's eye for treatment;

- 3 b) folding a surface flap of corneal tissue of the selected eye aside;  
4 c) exposing a surface of the cornea under the flap;  
5 d) applying a first laser shot to the exposed corneal surface;  
6 i) the laser shot having a wavelength of 193 nanometers;  
7 ii) the laser shot having a diameter and an area;  
8 iii) the laser shot having a center point;  
9 iv) the laser shot area being smaller than the area of the  
10 exposed corneal surface; and,  
11 v) the laser shot ablating corneal tissue from the exposed  
12 corneal surface;  
13 e) applying a second laser shot to the exposed corneal surface;  
14 i) the laser shot having a wavelength of 193 nanometers;  
15 ii) the laser shot having a diameter and an area;  
16 iii) the laser shot having a center point;  
17 iv) the laser shot area being smaller than the area of the  
18 exposed corneal surface; and,  
19 v) the laser shot ablating corneal tissue from the exposed  
20 corneal surface;  
21 f) applying a third laser shot to the exposed corneal surface;  
22 i) the laser shot having a wavelength of 193 nanometers;  
23 ii) the laser shot having a diameter and an area;  
24 iii) the laser shot having a center point;  
25 iv) the laser shot area being smaller than the area of the  
26 exposed corneal surface; and,  
27 v) the laser shot ablating corneal tissue from the exposed  
28 corneal surface;  
29 g) the first, second and third laser shots being removed from each  
30 other;  
31 h) the distance between the center point of the first laser shot and the  
32 center point of the second laser shot being sufficient so that any plume of ablated

material from the first laser shot will not substantially interfere with the second laser shot;

i) the distance between the center point of the second laser shot and the center point of the third laser shot being sufficient so that any plume of ablated material from the second laser shot will not substantially interfere with the third laser shot;

j) the distance and time between the third laser shot and the first laser shot being sufficient so that any plume of ablated material from the first laser shot will not substantially interfere with the third laser shot; and,

k) repeating acts d) through j) a plurality of times.

3. A method for correcting vision comprising:

- a) selecting a patient's eye for treatment;
- b) folding a surface flap of corneal tissue of the selected eye aside;
- c) exposing a surface of the cornea under the flap;
- d) applying a first laser shot to the exposed corneal surface;

- i) the laser shot having a wavelength of 193 nanometers;
  - ii) the laser shot having a diameter and an area;
  - iii) the laser shot having a center point;
  - iv) the laser shot area being smaller than the area of the exposed corneal surface; and,

- v) the laser shot ablating corneal tissue from the exposed corneal surface;

- e) applying a second laser shot to the exposed corneal surface;

- i) the laser shot having a wavelength of 193 nanometers;
  - ii) the laser shot having a diameter and an area;
  - iii) the laser shot having a center point;
  - iv) the laser shot area being smaller than the area of the exposed corneal surface; and,

19 v) the laser shot ablating corneal tissue from the exposed  
20 corneal surface;

21 f) applying a third laser shot to the exposed corneal surface;  
22 i) the laser shot having a wavelength of 193 nanometers;  
23 ii) the laser shot having a diameter and an area;  
24 iii) the laser shot having a center point;  
25 iv) the laser shot area being smaller than the area of the  
26 exposed corneal surface; and,

27 v) the laser shot ablating corneal tissue from the exposed  
28 corneal surface;

29 g) applying a fourth laser shot to the exposed corneal surface;  
30 i) the laser shot having a wavelength of 193 nanometers;  
31 ii) the laser shot having a diameter and an area;  
32 iii) the laser shot having a center point;  
33 iv) the laser shot area being smaller than the area of the  
34 exposed corneal surface; and,

35 v) the laser shot ablating corneal tissue from the exposed  
36 corneal surface;

37 h) the first, second, third and fourth laser shots being removed from  
38 each other;

39 i) the distance between the center point of the first laser shot and the  
40 center point of the second laser shot being sufficient so that any plume of ablated  
41 material from the first laser shot will not substantially interfere with the second laser  
42 shot;

43 j) the distance between the center point of the third laser shot and  
44 the center of the second laser shot being sufficient so that any plume of ablated  
45 material from the second laser shot will not substantially interfere with the third laser  
46 shot;

47 k) the distance between the center point of the fourth laser shot and  
48 the center point of the third laser shot being sufficient so that any plume of ablated  
49 material from the third laser shot will not substantially interfere with the fourth laser shot;

50 l) the distance and time between the third laser shot and the first  
51 laser shot being sufficient so that any plume of ablated material from the first laser shot  
52 will not substantially interfere with the third laser shot;

53 m) the distance and time between the fourth laser shot and the first  
54 laser shot being sufficient so that any plume of ablated material from the first laser shot  
55 will not substantially interfere with the fourth laser shot; and,

56 n) repeating acts d) through m) a plurality of times.

1 4. A method for correcting vision comprising:

2 a) applying a first laser shot to a selected area of a corneal surface of  
3 an eye;

4 i) the laser shot having a wavelength of 193 nanometers;  
5 ii) the laser shot having a diameter and an area;  
6 iii) the laser shot having a center point;  
7 iv) the laser shot area being smaller than the area of the  
8 corneal surface; and,

9 v) the laser shot ablating corneal tissue from the corneal  
10 surface;

11 b) applying a second laser shot to the corneal surface;  
12 i) the laser shot having a wavelength of 193 nanometers;  
13 ii) the laser shot having a diameter and an area;  
14 iii) the laser shot having a center point;  
15 iv) the laser shot area being smaller than the area of the  
16 corneal surface; and,

17 v) the laser shot ablating corneal tissue from the corneal  
18 surface;

19 c) the second laser shot being removed from the first laser shot;

d) the distance between the center point of the first laser shot and the center point of the second laser shot being sufficient so that any plume of ablated material from the first laser shot will not substantially interfere with the second laser shot;

e) repeating acts a) through d) a plurality of times.

5. A method for correcting vision comprising:

a) applying a first laser shot to a selected area of a corneal surface of an eye;

- i) the laser shot having a wavelength of 193 nanometers;
- ii) the laser shot having a diameter and an area;
- iii) the laser shot having a center point;
- iv) the laser shot area being smaller than the area of the corneal surface; and,
- v) the laser shot ablating corneal tissue from the corneal surface;

b) applying a second laser shot to the corneal surface;

- i) the laser shot having a wavelength of 193 nanometers;
- ii) the laser shot having a diameter and an area;
- iii) the laser shot having a center point;
- iv) the laser shot area being smaller than the area of the corneal surface; and,
- v) the laser shot ablating corneal tissue from the corneal surface;

c) applying a third laser shot to the exposed corneal surface;

- i) the laser shot having a wavelength of 193 nanometers;
- ii) the laser shot having a diameter and an area;
- iii) the laser shot having a center point;
- iv) the laser shot area being smaller than the area of the corneal surface; and,

- 25 v) the laser shot ablating corneal tissue from the corneal  
26 surface;  
27 d) the first, second and third laser shots being removed from each  
28 other;  
29 e) the distance between the center point of the first laser shot and the  
30 center point of the second laser shot being sufficient so that any plume of ablated  
31 material from the first laser shot will not substantially interfere with the second laser  
32 shot;  
33 f) the distance between the center point of the second laser shot and  
34 the center of the third laser shot being sufficient so that any plume of ablated material  
35 from the second laser shot will not substantially interfere with the third laser shot;  
36 g) the distance and time between the third laser shot and the first  
37 laser shot being sufficient so that any plume of ablated material from the first laser shot  
38 will not substantially interfere with the third laser shot; and,  
39 h) repeating acts a) through g) a plurality of times.

1 6. A method for correcting vision comprising:

- 2 a) applying a first laser shot to a selected area of a corneal surface of  
3 an eye;  
4 i) the laser shot having a wavelength of 193 nanometers;  
5 ii) the laser shot having a diameter and an area;  
6 iii) the laser shot having a center point;  
7 iv) the laser shot area being smaller than the area of the  
8 corneal surface; and,  
9 v) the laser shot ablating corneal tissue from the corneal  
10 surface;  
11 b) applying a second laser shot to the corneal surface;  
12 i) the laser shot having a wavelength of 193 nanometers;  
13 ii) the laser shot having a diameter and an area;  
14 iii) the laser shot having a center point;

15 iv) the laser shot area being smaller than the area of the  
16 corneal surface; and,  
17 v) the laser shot ablating corneal tissue from the corneal  
18 surface;  
19 c) applying a third laser shot to the corneal surface;  
20 i) the laser shot having a wavelength of 193 nanometers;  
21 ii) the laser shot having a diameter and an area;  
22 iii) the laser shot having a center point;  
23 iv) the laser shot area being smaller than the area of the  
24 corneal surface; and,  
25 v) the laser shot ablating corneal tissue from the corneal  
26 surface;  
27 d) applying a fourth laser shot to the corneal surface;  
28 i) the laser shot having a wavelength of 193 nanometers;  
29 ii) the laser shot having a diameter and an area;  
30 iii) the laser shot having a center point;  
31 iv) the laser shot area being smaller than the area of the  
32 corneal surface; and,  
33 v) the laser shot ablating corneal tissue from the corneal  
34 surface;  
35 e) the first, second, third and fourth laser shots being removed from  
36 each other;  
37 f) the distance between the center point of the first laser shot and the  
38 center point of the second laser shot being sufficient so that any plume of ablated  
39 material from the first laser shot will not substantially interfere with the second laser  
40 shot;  
41 g) the distance between the center point of the third laser shot and  
42 the center of the second laser shot being sufficient so that any plume of ablated  
43 material from the second laser shot will not substantially interfere with the third laser  
44 shot;



- 45 h) the distance between the center point of the fourth laser shot and  
46 the center point of the third laser shot being sufficient so that any plume of ablated  
47 material from the third laser shot will not substantially interfere with the fourth laser shot;  
48 i) the distance and time between the third laser shot and the first  
49 laser shot being sufficient so that any plume of ablated material from the first laser shot  
50 will not substantially interfere with the third laser shot;  
51 j) the distance and time between the fourth laser shot and the first  
52 laser shot being sufficient so that any plume of ablated material from the first laser shot  
53 will not substantially interfere with the fourth laser shot; and,  
54 k) repeating acts a) through j) a plurality of times.

1 7. A method for correcting vision comprising:  
2 folding a flap of corneal tissue of an eye aside, exposing a surface of the  
3 cornea under the flap;  
4 selecting a pattern for the placement of laser beam pulses on the exposed  
5 surface of the cornea;  
6 the selected pattern comprising at least three points, the points being  
7 spaced apart from each other;  
8 applying a first laser pulse to the exposed corneal surface at the first point  
9 in the pattern, applying a second laser pulse to the exposed corneal surface at the  
10 second point in the pattern, and applying a third laser pulse to the exposed corneal  
11 surface at the third point in the pattern;  
12 the laser pulses ablating an area of tissue from the exposed surface of the  
13 cornea;  
14 the ablated area of tissue from the second pulse being spaced apart from  
15 the ablated area of tissue from the first pulse; and,  
16 the area of ablated tissue from the third pulse being spaced apart from the  
17 area of ablated tissue of the second pulse.

1 8. The method of claim 7 wherein the area of ablated tissue from the third  
2 shot is removed from the area of tissue of the first shot.

1 9. The method of claim 7 wherein the laser pulses are from an excimer laser.

1 10. The method of claim 8 wherein the laser pulses are from an excimer laser.

1 *sub* 11. A method for correcting vision comprising:  
2 *p2* selecting a pattern for the placement of laser beam pulses on an eye;  
3 the selected pattern comprising at least three points; the points being  
4 spaced apart from each other;  
5 applying a first laser pulse to the corneal surface of the eye at the first  
6 point in the pattern, applying a second laser pulse to the corneal surface at the second  
7 point in the pattern, and applying a third laser pulse to the corneal surface at the third  
8 point in the pattern;  
9 the laser pulses ablating an area of tissue from the cornea of the eye;  
10 the ablated area of tissue from the second pulse being spaced apart from  
11 the ablated area of tissue from the first pulse; and,  
12 the area of ablated tissue from the third pulse being spaced apart from the  
13 area of ablated tissue of the second pulse.

1 12. The method of claim 10 wherein the area of ablated tissue from the third  
2 shot is removed from the area of tissue of the first shot.

1 13. The method of claim 10 wherein the laser pulses are from an excimer  
2 laser.

1 14. The method of claim ~~11~~ wherein the laser pulses are from an excimer  
2 laser.

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15. A method for correcting vision comprising:
- a) selecting a patient's eye for treatment;
  - b) folding a flap of corneal tissue of the selected eye aside;
  - c) exposing a surface of the cornea under the flap;
  - d) selecting a spatially distributed shot pattern for applying a laser beam to the exposed surface of the cornea;
  - e) applying a first laser shot to the exposed corneal surface;
    - i) the laser shot having a diameter and an area;
    - ii) the laser shot having a center point;
    - iii) the laser shot area being smaller than the area of the exposed corneal surface; and,
    - iv) the laser shot ablating corneal tissue from the exposed corneal surface;
  - f) applying a second laser shot to the exposed corneal surface;
    - i) the laser shot having a diameter and an area;
    - ii) the laser shot having a center point;
    - iii) the laser shot area being smaller than the area of the exposed corneal surface; and,
    - iv) the laser shot ablating corneal tissue from the exposed corneal surface;
  - g) applying a third laser shot to the exposed corneal surface;
    - i) the laser shot having a diameter and an area;
    - ii) the laser shot having a center point;
    - iii) the laser shot area being smaller than the area of the exposed corneal surface; and,
    - iv) the laser shot ablating corneal tissue from the exposed corneal surface;
  - h) the second laser shot being spaced apart from the first laser shot; the third laser shot being spaced apart from the first and second laser shots so that the

eye can clear in one place before contacting that area again with another laser shot;  
and,

i) repeating acts e) through h) a plurality of times to apply the  
spatially distributed shot pattern.

16. The method of claim 15, wherein no center point of any shot in the pattern  
being coincident with a subsequent center point of a shot in the pattern.

17. A method for correcting vision comprising:

- a) selecting a patient's eye for treatment;
- b) selecting a spatially distributed shot pattern of laser beam shots;
- c) selecting an area of the cornea of the eye for applying the spatially  
distributed laser beam shot pattern;
- d) applying a first laser shot to the selected area of the corneal  
surface;
  - i) the laser shot having a diameter and an area;
  - ii) the laser shot having a center point;
  - iii) the laser shot area being smaller than the selected area of  
the corneal surface; and,
  - iv) the laser shot ablating corneal tissue from the selected area  
of the corneal surface;
- f) applying a second laser shot to the selected area of the corneal  
surface;
  - i) the laser shot having a diameter and an area;
  - ii) the laser shot having a center point;
  - iii) the laser shot area being smaller than the selected area of  
the corneal surface; and,
  - iv) the laser shot ablating corneal tissue from the selected area  
of the corneal surface;

22 g) applying a third laser shot to the selected area of the corneal  
23 surface;  
24 i) the laser shot having a diameter and an area;  
25 ii) the laser shot having a center point;  
26 iii) the laser shot area being smaller than the area of the  
27 selected area of the corneal surface; and,  
28 iv) the laser shot ablating corneal tissue from the selected area  
29 of the corneal surface;  
30 h) the second laser shot being spaced apart from the first laser shot;  
31 the third laser shot being spaced apart from the first and second laser shots so that the  
32 eye can clear in one place before contacting that area again with another laser shot;  
33 and,  
34 i) repeating acts e) through h) a plurality of times to apply the  
35 spatially distributed shot pattern.

1 18. The method of claim 17, wherein no center point of any shot in the pattern  
2 being coincident with a subsequent center point of a shot in the pattern.

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Sub B5 19. A method for correcting vision comprising:  
a) selecting a patient's eye for treatment;  
b) folding a surface flap of corneal tissue of the selected eye aside;  
c) exposing a surface of the cornea under the flap;  
d) applying a first laser shot to the exposed corneal surface;  
i) the laser shot having a diameter and an area;  
ii) the laser shot having a center point;  
iii) the laser shot area being smaller than the area of the  
exposed corneal surface; and  
iv) the laser shot ablating corneal tissue from the exposed  
corneal surface;  
e) applying a second laser shot to the exposed corneal surface;

- 13 i) the laser shot having a diameter and an area;  
14 ii) the laser shot having a center point;  
15 iii) the laser shot area being smaller than the area of the  
16 exposed corneal surface; and,  
17 iv) the laser shot ablating corneal tissue from the exposed  
18 corneal surface;  
19 f) the second laser shot being removed from the first laser shot;  
20 g) the distance between the center point of the first laser shot and the  
21 center point of the second laser shot being sufficient so that any plume of ablated  
22 material from the first laser shot will not substantially interfere with the second laser  
23 shot; and,  
24 h) repeating acts d) through g) a plurality of times.

20. A method for correcting vision comprising:

- 1 a) selecting a patient's eye for treatment;  
2 b) folding a surface flap of corneal tissue of the selected eye aside;  
3 c) exposing a surface of the cornea under the flap;  
4 d) applying a first laser shot to the exposed corneal surface;  
5 i) the laser shot having a diameter and an area;  
6 ii) the laser shot having a center point;  
7 iii) the laser shot area being smaller than the area of the  
8 exposed corneal surface; and,  
9 iv) the laser shot ablating corneal tissue from the exposed  
10 corneal surface;  
11 e) applying a second laser shot to the exposed corneal surface;  
12 i) the laser shot having a diameter and an area;  
13 ii) the laser shot having a center point;  
14 iii) the laser shot area being smaller than the area of the  
15 exposed corneal surface; and,  
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- 17 iv) the laser shot ablating corneal tissue from the exposed  
18 corneal surface;  
19 f) applying a third laser shot to the exposed corneal surface;  
20 i) the laser shot having a diameter and an area;  
21 ii) the laser shot having a center point;  
22 iii) the laser shot area being smaller than the area of the  
23 exposed corneal surface; and  
24 iv) the laser shot ablating corneal tissue from the exposed  
25 corneal surface;  
26 g) the first, second and third laser shots being removed from each  
27 other;  
28 h) the distance between the center point of the first laser shot and the  
29 center point of the second laser shot being sufficient so that any plume of ablated  
30 material from the first laser shot will not substantially interfere with the second laser  
31 shot;  
32 i) the distance between the center point of the second laser shot and  
33 the center point of the third laser shot being sufficient so that any plume of ablated  
34 material from the second laser shot will not substantially interfere with the third laser  
35 shot;  
36 j) the distance and time between the third laser shot and the first  
37 laser shot being sufficient so that any plume of ablated material from the first laser shot  
38 will not substantially interfere with the third laser shot; and,  
39 k) repeating acts d) through j) a plurality of times.

1 21. A method for correcting vision comprising:

- 2 a) selecting a patient's eye for treatment;  
3 b) folding a surface flap of corneal tissue of the selected eye aside;  
4 c) exposing a surface of the cornea under the flap;  
5 d) applying a first laser shot to the exposed corneal surface;  
6 i) the laser shot having a diameter and an area;

- 7 ii) the laser shot having a center point;
- 8 iii) the laser shot area being smaller than the area of the
- 9 exposed corneal surface; and
- 10 iv) the laser shot ablating corneal tissue from the exposed
- 11 corneal surface;
- 12 e) applying a second laser shot to the exposed corneal surface;
- 13 i) the laser shot having a diameter and an area;
- 14 ii) the laser shot having a center point;
- 15 iii) the laser shot area being smaller than the area of the
- 16 exposed corneal surface; and,
- 17 iv) the laser shot ablating corneal tissue from the exposed
- 18 corneal surface;
- 19 f) applying a third laser shot to the exposed corneal surface;
- 20 i) the laser shot having a diameter and an area;
- 21 ii) the laser shot having a center point;
- 22 iii) the laser shot area being smaller than the area of the
- 23 exposed corneal surface; and,
- 24 iv) the laser shot ablating corneal tissue from the exposed
- 25 corneal surface;
- 26 g) applying a fourth laser shot to the exposed corneal surface;
- 27 i) the laser shot having a diameter and an area;
- 28 ii) the laser shot having a center point;
- 29 iii) the laser shot area being smaller than the area of the
- 30 exposed corneal surface; and,
- 31 iv) the laser shot ablating corneal tissue from the exposed
- 32 corneal surface;
- 33 h) the first, second, third and fourth laser shots being removed from
- 34 each other;
- 35 i) the distance between the center point of the first laser shot and the
- 36 center point of the second laser shot being sufficient so that any plume of ablated



material from the first laser shot will not substantially interfere with the second laser shot;

j) the distance between the center point of the third laser shot and the center of the second laser shot being sufficient so that any plume of ablated material from the second laser shot will not substantially interfere with the third laser shot;

k) the distance between the center point of the fourth laser shot and the center point of the third laser shot being sufficient so that any plume of ablated material from the third laser shot will not substantially interfere with the fourth laser shot;

l) the distance and time between the third laser shot and the first laser shot being sufficient so that any plume of ablated material from the first laser shot will not substantially interfere with the third laser shot;

m) the distance and time between the fourth laser shot and the first laser shot being sufficient so that any plume of ablated material from the first laser shot will not substantially interfere with the fourth laser shot; and,

n) repeating acts d) through m) a plurality of times.

22. A method for correcting vision comprising:

a) applying a first laser shot to a selected area of a cornea of an eye;

i) the laser shot having a diameter and an area;

ii) the laser shot having a center point;

iii) the laser shot area being smaller than the area of the

cornea; and

iv) the laser shot ablating corneal tissue from the cornea;

b) applying a second laser shot to the cornea;

i) the laser shot having a diameter and an area;

ii) the laser shot having a center point;

iii) the laser shot area being smaller than the area of the

cornea; and,

iv) the laser shot ablating corneal tissue from the cornea;

- 14 c) the second laser shot being removed from the first laser shot;  
15 d) the distance between the center point of the first laser shot and the  
16 center point of the second laser shot being sufficient so that any plume of ablated  
17 material from the first laser shot will not substantially interfere with the second laser  
18 shot;  
19 e) repeating acts a) through d) a plurality of times.

1 23. A method for correcting vision comprising:

- 2 a) applying a first laser shot to a selected area of a cornea of an eye;  
3 i) the laser shot having a wavelength of 193 nanometers;  
4 ii) the laser shot having a diameter and an area;  
5 iii) the laser shot having a center point;  
6 iv) the laser shot area being smaller than the area of the  
7 cornea; and  
8 v) the laser shot ablating corneal tissue from the cornea;  
9 b) applying a second laser shot to the cornea;  
10 i) the laser shot having a diameter and an area;  
11 ii) the laser shot having a center point;  
12 iii) the laser shot area being smaller than the area of the  
13 cornea; and  
14 iv) the laser shot ablating corneal tissue from the cornea;  
15 c) applying a third laser shot to the exposed cornea;  
16 i) the laser shot having a diameter and an area;  
17 ii) the laser shot having a center point;  
18 iii) the laser shot area being smaller than the area of the  
19 cornea; and  
20 iv) the laser shot ablating corneal tissue from the cornea;  
21 d) the first, second and third laser shots being removed from each  
22 other;

e) the distance between the center point of the first laser shot and the center point of the second laser shot being sufficient so that any plume of ablated material from the first laser shot will not substantially interfere with the second laser shot;

f) the distance between the center point of the second laser shot and the center of the third laser shot being sufficient so that any plume of ablated material from the second laser shot will not substantially interfere with the third laser shot;

g) the distance and time between the third laser shot and the first laser shot being sufficient so that any plume of ablated material from the first laser shot will not substantially interfere with the third laser shot; and,

h) repeating acts a) through g) a plurality of times.

24. A method for correcting vision comprising:

a) applying a first laser shot to a selected area of a cornea of an eye;

- i) the laser shot having a diameter and an area;
- ii) the laser shot having a center point;
- iii) the laser shot area being smaller than the area of the cornea; and,

iv) the laser shot ablating corneal tissue from the cornea;

b) applying a second laser shot to the cornea;

- i) the laser shot having a diameter and an area;
- ii) the laser shot having a center point;
- iii) the laser shot area being smaller than the area of the cornea; and

iv) the laser shot ablating corneal tissue from the cornea;

c) applying a third laser shot to the cornea;

- i) the laser shot having a diameter and an area;
- ii) the laser shot having a center point;
- iii) the laser shot area being smaller than the area of the cornea; and

- 19 iv) the laser shot ablating corneal tissue from the cornea;  
20 d) applying a fourth laser shot to the cornea;  
21 i) the laser shot having a diameter and an area;  
22 ii) the laser shot having a center point;  
23 iii) the laser shot area being smaller than the area of the  
24 cornea; and  
25 iv) the laser shot ablating corneal tissue from the cornea;  
26 e) the first, second, third and fourth laser shots being removed from  
27 each other;  
28 f) the distance between the center point of the first laser shot and the  
29 center point of the second laser shot being sufficient so that any plume of ablated  
30 material from the first laser shot will not substantially interfere with the second laser  
31 shot;  
32 g) the distance between the center point of the third laser shot and  
33 the center of the second laser shot being sufficient so that any plume of ablated  
34 material from the second laser shot will not substantially interfere with the third laser  
35 shot;  
36 h) the distance between the center point of the fourth laser shot and  
37 the center point of the third laser shot being sufficient so that any plume of ablated  
38 material from the third laser shot will not substantially interfere with the fourth laser shot;  
39 i) the distance and time between the third laser shot and the first  
40 laser shot being sufficient so that any plume of ablated material from the first laser shot  
41 will not substantially interfere with the third laser shot;  
42 j) the distance and time between the fourth laser shot and the first  
43 laser shot being sufficient so that any plume of ablated material from the first laser shot  
44 will not substantially interfere with the fourth laser shot; and,  
45 k) repeating acts a) through j) a plurality of times.

1 25. A method for correcting vision comprising:

- 2 a) selecting a patient's eye for treatment;

- 3 b) folding a surface flap of corneal tissue of the selected eye aside;  
4 c) exposing a surface of the cornea under the flap;  
5 d) applying a first laser shot to the exposed corneal surface;  
6 i) the laser shot having a wavelength of 193 nanometers;  
7 ii) the laser shot having a diameter and an area;  
8 iii) the laser shot having a center point;  
9 iv) the laser shot area being smaller than the area of the  
10 exposed corneal surface; and  
11 v) the laser shot ablating corneal tissue from the exposed  
12 corneal surface;  
13 e) applying a second laser shot to the exposed corneal surface;  
14 i) the laser shot having a wavelength of 193 nanometers;  
15 ii) the laser shot having a diameter and an area;  
16 iii) the laser shot having a center point;  
17 iv) the laser shot area being smaller than the area of the  
18 exposed corneal surface; and  
19 v) the laser shot ablating corneal tissue from the exposed  
20 corneal surface;  
21 f) the second laser shot being spaced apart from the first laser shot;  
22 g) the distance and time between the first laser shot and the second  
23 laser shot being sufficient so that any plume of ablated material from the first laser shot  
24 will not substantially interfere with the second laser shot; and,  
25 h) repeating acts d) through g) a plurality of times.

1 26. A method for correcting vision comprising:

- 2 a) selecting a patient's eye for treatment;  
3 b) folding a surface flap of corneal tissue of the selected eye aside;  
4 c) exposing a surface of the cornea under the flap;  
5 d) applying a first laser shot to the exposed corneal surface;  
6 i) the laser shot having a wavelength of 193 nanometers;

7 ii) the laser shot having a diameter and an area;  
8 iii) the laser shot having a center point;  
9 iv) the laser shot area being smaller than the area of the  
10 exposed corneal surface; and  
11 v) the laser shot ablating corneal tissue from the exposed  
12 corneal surface;  
13 e) applying a second laser shot to the exposed corneal surface;  
14 i) the laser shot having a wavelength of 193 nanometers;  
15 ii) the laser shot having a diameter and an area;  
16 iii) the laser shot having a center point;  
17 iv) the laser shot area being smaller than the area of the  
18 exposed corneal surface; and  
19 v) the laser shot ablating corneal tissue from the exposed  
20 corneal surface;  
21 f) applying a third laser shot to the exposed corneal surface;  
22 i) the laser shot having a wavelength of 193 nanometers;  
23 ii) the laser shot having a diameter and an area;  
24 iii) the laser shot having a center point;  
25 iv) the laser shot area being smaller than the area of the  
26 exposed corneal surface; and  
27 v) the laser shot ablating corneal tissue from the exposed  
28 corneal surface;  
29 g) the first, second and third laser shots being spaced apart from each  
30 other;  
31 h) the distance and time between the first laser shot and the second  
32 laser shot being sufficient so that any plume of ablated material from the first laser shot  
33 will not substantially interfere with the second laser shot;  
34 i) the distance between the second laser shot and the third laser shot  
35 being sufficient so that any plume of ablated material from the second laser shot will not  
36 substantially interfere with the third laser shot;

- 37 j) the distance and time between the third laser shot and the first  
38 laser shot being sufficient so that any plume of ablated material from the first laser shot  
39 will not substantially interfere with the third laser shot; and,  
40 k) repeating acts d) through j) a plurality of times.

1 27. A method for correcting vision comprising:

- 2 a) selecting a patient's eye for treatment;  
3 b) folding a surface flap of corneal tissue of the selected eye aside;  
4 c) exposing a surface of the cornea under the flap;  
5 d) applying a first laser shot to the exposed corneal surface;  
6 i) the laser shot having a wavelength of 193 nanometers;  
7 ii) the laser shot having a diameter and an area;  
8 iii) the laser shot having a center point;  
9 iv) the laser shot area being smaller than the area of the  
10 exposed corneal surface; and  
11 v) the laser shot ablating corneal tissue from the exposed  
12 corneal surface;  
13 e) applying a second laser shot to the exposed corneal surface;  
14 i) the laser shot having a wavelength of 193 nanometers;  
15 ii) the laser shot having a diameter and an area;  
16 iii) the laser shot having a center point;  
17 iv) the laser shot area being smaller than the area of the  
18 exposed corneal surface; and  
19 v) the laser shot ablating corneal tissue from the exposed  
20 corneal surface;  
21 f) applying a third laser shot to the exposed corneal surface;  
22 i) the laser shot having a wavelength of 193 nanometers;  
23 ii) the laser shot having a diameter and an area;  
24 iii) the laser shot having a center point;

25 iv) the laser shot area being smaller than the area of the  
26 exposed corneal surface; and

27 v) the laser shot ablating corneal tissue from the exposed  
28 corneal surface;

29 g) applying a fourth laser shot to the exposed corneal surface;

30 i) the laser shot having a wavelength of 193 nanometers;

31 ii) the laser shot having a diameter and an area;

32 iii) the laser shot having a center point;

33 iv) the laser shot area being smaller than the area of the  
34 exposed corneal surface; and

35 v) the laser shot ablating corneal tissue from the exposed  
36 corneal surface;

37 h) the first, second, third and fourth laser shots being spaced apart  
38 from each other;

39 i) the distance and time between the first laser shot and the second  
40 laser shot being sufficient so that any plume of ablated material from the first laser shot  
41 will not substantially interfere with the second laser shot;

42 j) the distance and time between the third laser shot and the second  
43 laser shot being sufficient so that any plume of ablated material from the second laser  
44 shot will not substantially interfere with the third laser shot;

45 k) the distance and time between the fourth laser shot and the third  
46 laser shot being sufficient so that any plume of ablated material from the third laser shot  
47 will not substantially interfere with the fourth laser shot;

48 l) the distance and time between the third laser shot and the first  
49 laser shot being sufficient so that any plume of ablated material from the first laser shot  
50 will not substantially interfere with the third laser shot;

51 m) the distance and time between the fourth laser shot and the first  
52 laser shot being sufficient so that any plume of ablated material from the first laser shot  
53 will not substantially interfere with the fourth laser shot; and,

54 n) repeating acts d) through m) a plurality of times.



- 1 28. A method for correcting vision comprising:
- 2 a) applying a first laser shot to a selected area of a cornea of an eye;
- 3 i) the laser shot having a wavelength of 193 nanometers;
- 4 ii) the laser shot having a diameter and an area;
- 5 iii) the laser shot having a center point;
- 6 iv) the laser shot area being smaller than the area of the
- 7 cornea; and
- 8 v) the laser shot ablating corneal tissue from the cornea;
- 9 b) applying a second laser shot to the cornea;
- 10 i) the laser shot having a wavelength of 193 nanometers;
- 11 ii) the laser shot having a diameter and an area;
- 12 iii) the laser shot having a center point;
- 13 iv) the laser shot area being smaller than the area of the
- 14 cornea; and,
- 15 v) the laser shot ablating corneal tissue from the cornea;
- 16 c) the second laser shot being spaced apart from the first laser shot;
- 17 d) the distance and time between the first laser shot and the second
- 18 laser shot being sufficient so that any plume of ablated material from the first laser shot
- 19 will not substantially interfere with the second laser shot;
- 20 e) repeating acts a) through d) a plurality of times.

- 1 29. A method for correcting vision comprising:
- 2 a) applying a first laser shot to a selected area of a cornea of an eye;
- 3 i) the laser shot having a wavelength of 193 nanometers;
- 4 ii) the laser shot having a diameter and an area;
- 5 iii) the laser shot having a center point;
- 6 iv) the laser shot area being smaller than the area of the
- 7 cornea; and
- 8 v) the laser shot ablating corneal tissue from the cornea;

- 9                   b)    applying a second laser shot to the cornea;  
10                    i)    the laser shot having a wavelength of 193 nanometers;  
11                    ii)   the laser shot having a diameter and an area;  
12                    iii)   the laser shot having a center point;  
13                    iv)   the laser shot area being smaller than the area of the  
14   cornea; and  
15                    v)    the laser shot ablating corneal tissue from the cornea;  
16                   c)    applying a third laser shot to the exposed cornea;  
17                    i)    the laser shot having a wavelength of 193 nanometers;  
18                    ii)   the laser shot having a diameter and an area;  
19                    iii)   the laser shot having a center point;  
20                    iv)   the laser shot area being smaller than the area of the  
21   cornea; and  
22                    v)    the laser shot ablating corneal tissue from the cornea;  
23                   d)    the first, second and third laser shots being spaced apart from each  
24   other;  
25                    e)    the distance and time between the first laser shot and the second  
26   laser shot being sufficient so that any plume of ablated material from the first laser shot  
27   will not substantially interfere with the second laser shot;  
28                    f)    the distance and time between the second laser shot and the third  
29   laser shot being sufficient so that any plume of ablated material from the second laser  
30   shot will not substantially interfere with the third laser shot;  
31                    g)    the distance and time between the third laser shot and the first  
32   laser shot being sufficient so that any plume of ablated material from the first laser shot  
33   will not substantially interfere with the third laser shot; and,  
34                    h)    repeating acts a) through g) a plurality of times.

1                   30.   A method for correcting vision comprising:

- 2                    a)    applying a first laser shot to a selected area of a cornea of an eye;  
3                    i)    the laser shot having a wavelength of 193 nanometers;

4 ii) the laser shot having a diameter and an area;  
5 iii) the laser shot having a center point;  
6 iv) the laser shot area being smaller than the area of the  
7 cornea; and  
8 v) the laser shot ablating corneal tissue from the cornea;  
9 b) applying a second laser shot to the cornea;  
10 i) the laser shot having a wavelength of 193 nanometers;  
11 ii) the laser shot having a diameter and an area;  
12 iii) the laser shot having a center point;  
13 iv) the laser shot area being smaller than the area of the  
14 cornea; and  
15 v) the laser shot ablating corneal tissue from the cornea;  
16 c) applying a third laser shot to the cornea;  
17 i) the laser shot having a wavelength of 193 nanometers;  
18 ii) the laser shot having a diameter and an area;  
19 iii) the laser shot having a center point;  
20 iv) the laser shot area being smaller than the area of the  
21 cornea; and  
22 v) the laser shot ablating corneal tissue from the cornea;  
23 d) applying a fourth laser shot to the cornea;  
24 i) the laser shot having a wavelength of 193 nanometers;  
25 ii) the laser shot having a diameter and an area;  
26 iii) the laser shot having a center point;  
27 iv) the laser shot area being smaller than the area of the  
28 cornea; and  
29 v) the laser shot ablating corneal tissue from the cornea;  
30 e) the first, second, third and fourth laser shots being spaced apart  
31 from each other;  
32 f) the distance between the center point of the first laser shot and the  
33 center point of the second laser shot being sufficient so that any plume of ablated

material from the first laser shot will not substantially interfere with the second laser shot;

g) the distance between the center point of the third laser shot and the center of the second laser shot being sufficient so that any plume of ablated material from the second laser shot will not substantially interfere with the third laser shot;

h) the distance between the center point of the fourth laser shot and the center point of the third laser shot being sufficient so that any plume of ablated material from the third laser shot will not substantially interfere with the fourth laser shot;

i) the distance and time between the third laser shot and the first laser shot being sufficient so that any plume of ablated material from the first laser shot will not substantially interfere with the third laser shot;

j) the distance and time between the fourth laser shot and the first laser shot being sufficient so that any plume of ablated material from the first laser shot will not substantially interfere with the fourth laser shot; and,

k) repeating acts a) through j) a plurality of times.

31. A method for correcting vision comprising:

- a) selecting a patient's eye for treatment;
- b) folding a surface flap of corneal tissue of the selected eye aside;
- c) exposing a surface of the cornea under the flap;
- d) applying a first laser shot to the exposed corneal surface;
  - i) the laser shot having a diameter and an area;
  - ii) the laser shot having a center point;
  - iii) the laser shot area being smaller than the area of the exposed corneal surface; and
  - iv) the laser shot ablating corneal tissue from the exposed corneal surface;
- e) applying a second laser shot to the exposed corneal surface;
  - i) the laser shot having a diameter and an area;

- ii) the laser shot having a center point;
- iii) the laser shot area being smaller than the area of the exposed corneal surface; and
- iv) the laser shot ablating corneal tissue from the exposed corneal surface;
- f) the second laser shot being spaced apart from the first laser shot;
- g) the distance and time between the first laser shot and the second laser shot being sufficient so that any plume of ablated material from the first laser shot will not substantially interfere with the second laser shot; and,
- h) repeating acts d) through g) a plurality of times.

32. A method for correcting vision comprising:

- a) selecting a patient's eye for treatment;
- b) folding a surface flap of corneal tissue of the selected eye aside;
- c) exposing a surface of the cornea under the flap;
- d) applying a first laser shot to the exposed corneal surface;
  - i) the laser shot having a diameter and an area;
  - ii) the laser shot having a center point;
  - iii) the laser shot area being smaller than the area of the exposed corneal surface; and
  - iv) the laser shot ablating corneal tissue from the exposed corneal surface;
- e) applying a second laser shot to the exposed corneal surface;
  - i) the laser shot having a diameter and an area;
  - ii) the laser shot having a center point;
  - iii) the laser shot area being smaller than the area of the exposed corneal surface; and
  - iv) the laser shot ablating corneal tissue from the exposed corneal surface;
- f) applying a third laser shot to the exposed corneal surface;

- 20 i) the laser shot having a diameter and an area;  
21 ii) the laser shot having a center point;  
22 iii) the laser shot area being smaller than the area of the  
23 exposed corneal surface; and  
24 iv) the laser shot ablating corneal tissue from the exposed  
25 corneal surface;  
26 g) the first, second and third laser shots being spaced apart from each  
27 other;  
28 h) the distance and time between the first laser shot and the second  
29 laser shot being sufficient so that any plume of ablated material from the first laser shot  
30 will not substantially interfere with the second laser shot;  
31 i) the distance between the second laser shot and the third laser shot  
32 being sufficient so that any plume of ablated material from the second laser shot will not  
33 substantially interfere with the third laser shot;  
34 j) the distance and time between the third laser shot and the first  
35 laser shot being sufficient so that any plume of ablated material from the first laser shot  
36 will not substantially interfere with the third laser shot; and,  
37 k) repeating acts d) through j) a plurality of times.

- 1 33. A method for correcting vision comprising:  
2 a) selecting a patient's eye for treatment;  
3 b) folding a surface flap of corneal tissue of the selected eye aside;  
4 c) exposing a surface of the cornea under the flap;  
5 d) applying a first laser shot to the exposed corneal surface;  
6 i) the laser shot having a diameter and an area;  
7 ii) the laser shot having a center point;  
8 iii) the laser shot area being smaller than the area of the  
9 exposed corneal surface; and  
10 iv) the laser shot ablating corneal tissue from the exposed  
11 corneal surface;

- 12 e) applying a second laser shot to the exposed corneal surface;  
13 i) the laser shot having a diameter and an area;  
14 ii) the laser shot having a center point;  
15 iii) the laser shot area being smaller than the area of the  
16 exposed corneal surface; and  
17 iv) the laser shot ablating corneal tissue from the exposed  
18 corneal surface;  
19 f) applying a third laser shot to the exposed corneal surface;  
20 i) the laser shot having a diameter and an area;  
21 ii) the laser shot having a center point;  
22 iii) the laser shot area being smaller than the area of the  
23 exposed corneal surface; and  
24 iv) the laser shot ablating corneal tissue from the exposed  
25 corneal surface;  
26 g) applying a fourth laser shot to the exposed corneal surface;  
27 i) the laser shot having a diameter and an area;  
28 ii) the laser shot having a center point;  
29 iii) the laser shot area being smaller than the area of the  
30 exposed corneal surface; and  
31 iv) the laser shot ablating corneal tissue from the exposed  
32 corneal surface;  
33 h) the first, second, third and fourth laser shots being spaced apart  
34 from each other;  
35 i) the distance and time between the first laser shot and the second  
36 laser shot being sufficient so that any plume of ablated material from the first laser shot  
37 will not substantially interfere with the second laser shot;  
38 j) the distance and time between the third laser shot and the second  
39 laser shot being sufficient so that any plume of ablated material from the second laser  
40 shot will not substantially interfere with the third laser shot;

41 k) the distance and time between the fourth laser shot and the third  
42 laser shot being sufficient so that any plume of ablated material from the third laser shot  
43 will not substantially interfere with the fourth laser shot;

44 l) the distance and time between the third laser shot and the first  
45 laser shot being sufficient so that any plume of ablated material from the first laser shot  
46 will not substantially interfere with the third laser shot;

47 m) the distance and time between the fourth laser shot and the first  
48 laser shot being sufficient so that any plume of ablated material from the first laser shot  
49 will not substantially interfere with the fourth laser shot; and,

50 n) repeating acts d) through m) a plurality of times.

1 34. A method for correcting vision comprising:

2 a) applying a first laser shot to a selected area of a cornea of an eye;

3 i) the laser shot having a diameter and an area;

4 ii) the laser shot having a center point;

5 iii) the laser shot area being smaller than the area of the  
6 cornea; and

7 iv) the laser shot ablating corneal tissue from the cornea;

8 b) applying a second laser shot to the cornea;

9 i) the laser shot having a diameter and an area;

10 ii) the laser shot having a center point;

11 iii) the laser shot area being smaller than the area of the  
12 cornea; and,

13 iv) the laser shot ablating corneal tissue from the cornea;

14 c) the second laser shot being spaced apart from the first laser shot;

15 d) the distance and time between the first laser shot and the second  
16 laser shot being sufficient so that any plume of ablated material from the first laser shot  
17 will not substantially interfere with the second laser shot;

18 e) repeating acts a) through d) a plurality of times.



1 35. A method for correcting vision comprising:  
2 a) applying a first laser shot to a selected area of a cornea of an eye;  
3 i) the laser shot having a diameter and an area;  
4 ii) the laser shot having a center point;  
5 iii) the laser shot area being smaller than the area of the  
6 cornea; and  
7 iv) the laser shot ablating corneal tissue from the cornea;  
8 b) applying a second laser shot to the cornea;  
9 i) the laser shot having a diameter and an area;  
10 ii) the laser shot having a center point;  
11 iii) the laser shot area being smaller than the area of the  
12 cornea; and  
13 iv) the laser shot ablating corneal tissue from the cornea;  
14 c) applying a third laser shot to the exposed cornea;  
15 i) the laser shot having a diameter and an area;  
16 ii) the laser shot having a center point;  
17 iii) the laser shot area being smaller than the area of the  
18 cornea; and  
19 iv) the laser shot ablating corneal tissue from the cornea;  
20 d) the first, second and third laser shots being spaced apart from each  
21 other;  
22 e) the distance and time between the first laser shot and the second  
23 laser shot being sufficient so that any plume of ablated material from the first laser shot  
24 will not substantially interfere with the second laser shot;  
25 f) the distance and time between the second laser shot and the third  
26 laser shot being sufficient so that any plume of ablated material from the second laser  
27 shot will not substantially interfere with the third laser shot;  
28 g) the distance and time between the third laser shot and the first  
29 laser shot being sufficient so that any plume of ablated material from the first laser shot  
30 will not substantially interfere with the third laser shot; and,

h) repeating acts a) through g) a plurality of times.

36. A method for correcting vision comprising:

a) applying a first laser shot to a selected area of a cornea of an eye;

i) the laser shot having a diameter and an area;

ii) the laser shot having a center point;

iii) the laser shot area being smaller than the area of the

cornea; and

iv) the laser shot ablating corneal tissue from the cornea;

b) applying a second laser shot to the cornea;

i) the laser shot having a diameter and an area;

ii) the laser shot having a center point;

iii) the laser shot area being smaller than the area of the

cornea; and

iv) the laser shot ablating corneal tissue from the cornea;

c) applying a third laser shot to the cornea;

i) the laser shot having a diameter and an area;

ii) the laser shot having a center point;

iii) the laser shot area being smaller than the area of the

cornea; and

iv) the laser shot ablating corneal tissue from the cornea;

d) applying a fourth laser shot to the cornea;

i) the laser shot having a diameter and an area;

ii) the laser shot having a center point;

iii) the laser shot area being smaller than the area of the

cornea; and

iv) the laser shot ablating corneal tissue from the cornea;

e) the first, second, third and fourth laser shots being spaced apart from each other;

28 f) the distance between the center point of the first laser shot and the  
29 center point of the second laser shot being sufficient so that any plume of ablated  
30 material from the first laser shot will not substantially interfere with the second laser  
31 shot;

32 g) the distance between the center point of the third laser shot and  
33 the center of the second laser shot being sufficient so that any plume of ablated  
34 material from the second laser shot will not substantially interfere with the third laser  
35 shot;

36 h) the distance between the center point of the fourth laser shot and  
37 the center point of the third laser shot being sufficient so that any plume of ablated  
38 material from the third laser shot will not substantially interfere with the fourth laser shot;

39 i) the distance and time between the third laser shot and the first  
40 laser shot being sufficient so that any plume of ablated material from the first laser shot  
41 will not substantially interfere with the third laser shot;

42 j) the distance and time between the fourth laser shot and the first  
43 laser shot being sufficient so that any plume of ablated material from the first laser shot  
44 will not substantially interfere with the fourth laser shot; and,

45 k) repeating acts a) through j) a plurality of times.

1 37. A method for correcting vision comprising:  
2 folding a flap of corneal tissue of an eye aside, exposing a surface of the  
3 cornea under the flap;  
4 selecting a pattern for the placement of laser beam pulses on the exposed  
5 surface of the cornea;  
6 the selected pattern comprising at least three points;  
7 applying a first laser pulse to the exposed corneal surface at the first point  
8 in the pattern, applying a second laser pulse to the exposed corneal surface at the  
9 second point in the pattern, and applying a third laser pulse to the exposed corneal  
10 surface at the third point in the pattern;

11 the laser pulses ablating an area of tissue from the exposed surface of the  
12 cornea;

13 the ablated area of tissue from the second pulse being removed from the  
14 ablated area of tissue from the first pulse; and,

15 the area of ablated tissue from the third pulse being removed from the  
16 area of ablated tissue of the second pulse.

1 38. The method of claim 37 wherein the area of ablated tissue from the third  
2 shot is removed from the area of tissue of the first shot.

1 <sup>10</sup>39. The method of claim <sup>9</sup>35 wherein the laser pulses are from an excimer  
2 laser.

1 <sup>12</sup>40. The method of claim <sup>11</sup>36 wherein the laser pulses are from an excimer  
2 laser.

1 <sup>Sub 36</sup>41. A method for correcting vision comprising:  
2 selecting a pattern for the placement of laser beam pulses on an eye;  
3 the selected pattern comprising at least three points;  
4 applying a first laser pulse to the corneal surface of the eye at the first  
5 point in the pattern, applying a second laser pulse to the corneal surface at the second  
6 point in the pattern, and applying a third laser pulse to the corneal surface at the third  
7 point in the pattern;

8 the laser pulses ablating an area of tissue from the cornea of the eye;  
9 the ablated area of tissue from the second pulse being removed from the  
10 ablated area of tissue from the first pulse; and,  
11 the area of ablated tissue from the third pulse being removed from the  
12 area of ablated tissue of the second pulse.

1 42. The method of claim 41 wherein the area of ablated tissue from the third  
2 shot is removed from the area of tissue of the first shot.

1 43. The method of claim ~~41~~<sup>3</sup> wherein the laser pulses are from an excimer  
2 laser.

1 44. The method of claim ~~42~~<sup>4</sup> wherein the laser pulses are from an excimer  
2 laser.

1 *sub* 45. A method for correcting vision comprising:  
2  
3 a) selecting a patient's eye for treatment;  
4 b) folding a flap of corneal tissue of the selected eye aside;  
5 c) exposing a surface of the cornea under the flap;  
6 d) selecting a spatially distributed shot pattern for applying a laser  
7 beam to the exposed surface of the cornea;  
8 e) applying a first laser shot to the exposed corneal surface;  
9 i) the laser shot having a diameter and an area;  
10 ii) the laser shot having a center point;  
11 iii) the laser shot area being smaller than the area of the  
12 exposed corneal surface; and  
13 iv) the laser shot ablating corneal tissue from the exposed  
14 corneal surface;  
15 f) applying a second laser shot to the exposed corneal surface;  
16 i) the laser shot having a diameter and an area;  
17 ii) the laser shot having a center point;  
18 iii) the laser shot area being smaller than the area of the  
19 exposed corneal surface; and  
20 iv) the laser shot ablating corneal tissue from the exposed  
21 corneal surface;  
g) applying a third laser shot to the exposed corneal surface;

- 22 i) the laser shot having a diameter and an area;  
23 ii) the laser shot having a center point;  
24 iii) the laser shot area being smaller than the area of the  
25 exposed corneal surface; and  
26 iv) the laser shot ablating corneal tissue from the exposed  
27 corneal surface;  
28 h) the second laser shot being removed from the first laser shot; the  
29 third laser shot being removed from the first and second laser shots so that the eye can  
30 clear in one place before contacting that area again with another laser shot; and,  
31 i) repeating acts e) through h) a plurality of times to apply the  
32 spatially distributed shot pattern.

1 46. The method of claim 45, wherein no center point of any shot in the pattern  
2 being coincident with a subsequent center point of a shot in the pattern.

- 1 47. A method for correcting vision comprising:  
2 a) selecting a patient's eye for treatment;  
3 b) selecting a spatially distributed shot pattern of laser beam shots;  
4 c) selecting an area of the cornea of the eye for applying the spatially  
5 distributed laser beam shot pattern;  
6 d) applying a first laser shot to the selected area of the corneal  
7 surface;  
8 i) the laser shot having a diameter and an area;  
9 ii) the laser shot having a center point;  
10 iii) the laser shot area being smaller than the selected area of  
11 the corneal surface; and  
12 iv) the laser shot ablating corneal tissue from the selected area  
13 of the corneal surface;  
14 f) applying a second laser shot to the selected area of the corneal  
15 surface;

- 16 i) the laser shot having a diameter and an area;  
17 ii) the laser shot having a center point;  
18 iii) the laser shot area being smaller than the selected area of  
19 the corneal surface; and  
20 iv) the laser shot ablating corneal tissue from the selected area  
21 of the corneal surface;  
22 g) applying a third laser shot to the selected area of the corneal  
23 surface;  
24 i) the laser shot having a diameter and an area;  
25 ii) the laser shot having a center point;  
26 iii) the laser shot area being smaller than the area of the  
27 selected area of the corneal surface; and,  
28 iv) the laser shot ablating corneal tissue from the selected area  
29 of the corneal surface;  
30 h) the second laser shot being removed from the first laser shot; the  
31 third laser shot being removed from the first and second laser shots so that the eye can  
32 clear in one place before contacting that area again with another laser shot; and,  
33 i) repeating acts e) through h) a plurality of times to apply the  
34 spatially distributed shot pattern.

1 48. The method of claim 47, wherein no center point of any shot in the pattern  
2 being coincident with a subsequent center point of a shot in the pattern.